CONTENTS

Use of spreadsheets in thermal analysis. Part 4
L. Reich (Hoboken, NJ, U.S.A.) 1
Use of spreadsheets in thermal analysis. Part 5
L. Reich (Hoboken, NJ, U.S.A.) 7
Differential thermal gravimetric analysis of unsaturated sultam derivatives
S.H. Doss (Cairo, Egypt) and A. Dyer (Salford, Gt. Britain) 13
Thermal behaviour of some Ni^{II} and Fe^{III} salts
A.M. Gadalla and H.-F. Yu (College Station, TX, U.S.A.) 21
Mechanistic modelling of the pyrolysis of 3-methylpentane
F. Billaud, K. Elyahyaoui, F. Baronnet, P.M. Marquaire, C. Muller and G.M. Come (Nancy, France) 37
Thermochemical study of 2,6-dinitrotoluene
A. Finch (Egham, Gt. Britain) and J. Payne (Sevenoaks, Gt. Britain) 55
Thermodynamic properties of molten sulphides Cu_2S–PbS
J. Botor, R. Zębik and J. Konieczny (Gliwice, Poland) 65
Specific features of nickel oxides obtained by thermal and laser induced decomposition of nickel salts. A comparative study
C. Popescu, I. Ursu, M. Popescu, R. Alexandrescu, I. Morjan, I.N. Mihailescu and V. Jianu (Bucharest, Romania) 79
Thermal expansion properties of some vitreous and crystalline silicate materials
S.N. Salama (Cairo, Egypt) 91
Heat capacity and phase transitions of mixtures of pentaerythritol and trimethylolpropane over the superambient temperature range
Z.Y. Zhang and M.L. Yang (Xi'an, China) 103
$\Delta S^{\ominus}$ calculation in gas chromatographic processes and $\Delta H^{\ominus}$-characterised polarity of stationary phase
X.-E. Cai, C.-R. Ma and Z. Jing (Shanghai, China) 111
Simultaneous correlation of ternary vapour–liquid and liquid–liquid equilibria
I. Nagata (Ishikawa, Japan) 119
A test of the excess Gibbs free energy models in ternary and quaternary liquid–liquid equilibrium calculations
I. Nagata and M. Fukazawa (Ishikawa, Japan) 127
On the kinetics of thermal decomposition of wood and wood components
T. Cordero, J.M. Rodríguez-Maroto, J. Rodríguez-Mirasol and J.J. Rodríguez (Malaga, Spain) 135
Energetics of inter- and intramolecular bonds in alkanediols. IV. The thermochemical study of 1,2-alkanediols at 298.15 K
P. Knauth and R. Sabbah (Marseille, France) 145
The non-isothermal reaction kinetics of pyrite with water vapour
I.C. Hoare and J.H. Levy (Menai, NSW, Australia) 153
On the change in the thermal behaviour of the compound EVA owing to accelerated thermal and radiation-induced ageing
E. Segal, P. Budrugeac, S. Ciutacu and G. Mares (Bucharest, Romania) 161
A thermo-oxidation, non-isothermal kinetic study of thermally aged and γ-irradiation-aged EVA compound samples
E. Segal, P. Budrugeac and S. Ciutacu (Bucharest, Romania) 171
Thermal, electrical and structural properties of chloro complexes of cobalt, nickel, copper and zinc with 6,7-dimethyl-2,3-di(2-pyridyl)quinoxaline
J.R. Allan, A.D. Paton and K. Turvey (Edinburgh, Gt. Britain) 177
Investigation of the oxidation behaviour of Mg-containing intermetallics by thermal analysis
J. Christopher, I.A.P.S. Murthy and C.S. Swamy (Madras, India) 191
The shape of a thermoanalytical curve and its kinetic information content
J. Málek and J.M. Criado (Seville, Spain) 199

Heats of solution of 1-nonanol, 1-decanol and 1-undecanol in cyclohexane at 298.15 K and 308.15 K
Š. Paljk and C. Klofutar (Ljubljana, Yugoslavia) and U. Domańska (Warsaw, Poland) 211
Excess enthalpies of nonan-1-ol and undecan-1-ol with octane at high dilutions and at 298.15 K
U. Domańska and K. Domański (Warsaw, Poland), C. Klofutar and Š. Paljk (Ljubljana, Yugoslavia) 227
Complexes of biologically important ligands: thermal properties of coordination compounds obtained by reaction of some divalent metal ions with 2-methyl- and 4-methylimidazole
R. Curini and S. Materazzi (Camerino, Italy) and G. D'Ascenzo (Rome, Italy) 237
Thermotropic compounds with two identical terminal mesogenic units and a central spacer
G. Poeti and E. Fanelli (Camerino, Italy) and D. Guillon (Strasbourg, France) 251
On a new kinetic classification of the solid–gas thermal decomposition reactions which occur in non-isothermal conditions
E. Urbanovici (Covasna, Romania) and E. Segal (Bucharest, Romania) 259
Some problems concerning the mathematical theory of non-isothermal kinetics. IV. On the classical non-isothermal change in the isothermal differential quasi-kinetic equation $d^2\alpha/dt^2 = \mathscr{G}(\alpha)f(T)$
E. Urbanovici (Covasna, Romania) and E. Segal (Bucharest, Romania) 265
Studies on the thermal decomposition of caesium sodium bromothiocyanatobismuthates(III)
A. Cygański and A. Turek (Łódź, Poland) 269
A new technique for determination of the possible reaction mechanism from non-isothermal thermogravimetric data
A. Abdu Zuru, R. Whitehead and D.L. Griffiths (Salford, Gt. Britain) 285
Studies of solid–solid phase transitions for $(n\text{-}C_{18}H_{37}NH_3)_2MCl_4$
R.-Y. Xu, D.-J. Kong, X.-E. Cai and J. Zhu (Shanghai, China) 307
Calorimetric study of NH_3 and CO_2 adsorption on erionites and zeolites L
S.S. Khvoshchev and A.V. Zverev (Leningrad, U.S.S.R.) 315
Enthalpic pair interaction coefficients of NaI–non-electrolyte mixtures in DMF solution at 25 °C. Part 2. Application of the group additivity concept to interactions in DMF solutions
H. Piekarski and W. Kobierski (Łódź, Poland) 323
Thermodynamics of ethyl iodide + benzene mixtures
K.C. Singh, K.C. Kalra and P. Kumar (Rohtak, India) 329
Effect of pre-heating on the thermal dehydration of lanthanide montmorillonites
J.M. Trillo, J. Poyato, M.M. Tobias, P.J. Sanchez and M.A. Castro (Seville, Spain) 339
Linear enthalpy relationships between the heats of formation of coordination compounds and the heats of protonation of the ligands. The copper(II)–*N*-(*meta*-substituted phenyl)iminodiacetic acid–α-amino acid competitive ternary system
H.-K. Lin, S.-X. Liu, Z.-X. Gu and Y.-T. Chen (Tianjin, China) 353
Thermal investigation and stereochemical studies of some cyclic ligand complexes of nickel(II) and zinc(II) in the solid state
R.B. Singh and S. Mitra (Canchipur Imphal, India) 365
Kinetic analysis of simulated DTA responses
M.W. Beck (Stevenston, Gt. Britain) and M.E. Brown (Grahamstown, South Africa) 379
Molten potassium pyrosulphate: reactions of some metal carbonates and basic carbonates
A.N. Ford, G. Helou and S.A. Tariq (Bundoora, Vic., Australia) 395
Thermal decomposition of alkali metal malonate anhydrides in various atmospheres
K. Muraishi (Yamagata, Japan) 401

Notes
More on the temperature integral
C. Popescu, Z. Tucsnak, M. Tucsnak and E. Segal (Bucharest, Romania) 411
On the existence of a maximum in the reaction rate for the non-isothermal autonomous adiabatically isolated reactions of the type $aA \rightarrow$ products
E. Urbanovici (Covasna, Romania) and E. Segal (Bucharest, Romania) 415

Author Index 419

Subject Index 421